ADAPT INSTRUCTIONS OF HOW TO CHANGE ONE-PIECE WINDSHIELD INTO BIPARTITE WINDSHIELD.

IRIZAR PB

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ALL TECHNICAL DOCUMENTATION, PART CATALOGS AND ADDITIONAL INFORMATION ARE AVAILABLE ON THE AFTER SALES WEBSITE WWW.IRIRZAR-SAT.COM.BR 3
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User's information

These technical instruction manual aims to guide the client during the substitution of one-piece windshield into a bipartite windshield. Are also found in this manual some advices and a guide of installation which will allow the substitution of the windshield with safety and speed, extending the vehicle's life.

During the windshield installation, it is possible that doubts rises regarding some installation process and used materials. We also provide a technical assistance network available on the services network's leaflet that comes with the bus as well as our homologated authorized service points.

The vehicle is delivered with the following documents and accessories:

- Warranty bulletin
- User's manual
- Manual of the electric and pneumatic scheme
- Folheto de Assistência técnica
    - Vehicle's key
    - Radio manual, manufacturer's cd.

All technical documentation, part catalogs and additional information are available on the after sales website www.irirzar-sat.com.br

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Adaptation of one-piece windshield for bipartite windshield.

The windshield's installation, can only be done by experienced professionals, in caso of doubts during the installation, please contact the technical assistance available on the leaflet of service network that come with all vehicles, as well as our authorized services points.

1 Preparation

1.1 SUPPORT DESK

This table allows the installer to have the necessary support to handle the equipments and the necessary tools with safety.

See images below:

Support desk

Support desk

1.2 WINDSHIELD WIPER'S REMOVAL

Will be necessary to remove the windshield's wiper using a N°17 key.

Follow the image below:

wiper

wiper

1.3 REARVIEW MIRROR'S REMOVAL

The rearview mirror of both sides must be removed. Use an Allen key N°5.

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See images of the mirror already removed:

Rear mirror's removal

Rear mirror's removal

1.4 FUSE BOX

Fuse box image.

Fuse box	
	The number 1 fuse must be removed so it doesn't happen any kind of accident. Avoiding the activation of any electric equipment. This fuse is responsible for the windshield wiper's activation

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1.5 EDGE'S PROTECTION

The edge where fits the windshield must be protected with tape to avoid scratches on the paint. The tape must cover all over the edge.

The bottom part must be protected with paper, so it doesn't scratch the painting.

See how to proceed visualizing the images below:

Tape protection

Paper protection

2 Materials and tools

2.1 MATERIALS AND TOOLS

Below, a list of materials and tools, that will be necessary during the substitution procedure.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig.7

Fig.8

Fig.9

Fig.1: glass saw
Fig.2: pneumatic knife to cut adhesive.
Fig.3: Betaprime 5500 (Dow)
Fig.4: Adesivo Dow – Betamate 7120BN
Fig.5: lateral windshield support.
Fig.6: central windshield support
Fig.7: wrench 17 and Allen 5.
Fig.8: cuppingglass
Fig.9: Adhesive applier's bomb

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3 Windshield removal

3.1 CUT THE RUBBER OF THE GLASS WITH A STEEL CABLE.

The windshield to be removed, must be cut with a glass saw, or with a steel cable, as shown below.

Cut with glass saw: Cut the window's corner, without affect the edge.

Corte com cabo de aço: Cut all the rubber, see below the image sequence.

Cut with glass saw.	
	The cut must be done by trained people, using all security protections to avoid any type of accident. See below the image, of how the windshield must be removed, also see the cut distance to the edge.

Corte com cordão de aço	
	The cut can only be made by trained personnel, using all security protections to avoid any type of accident. See the left image of how the windshield must be cut.

3.2 RESIDUE REMOVAL

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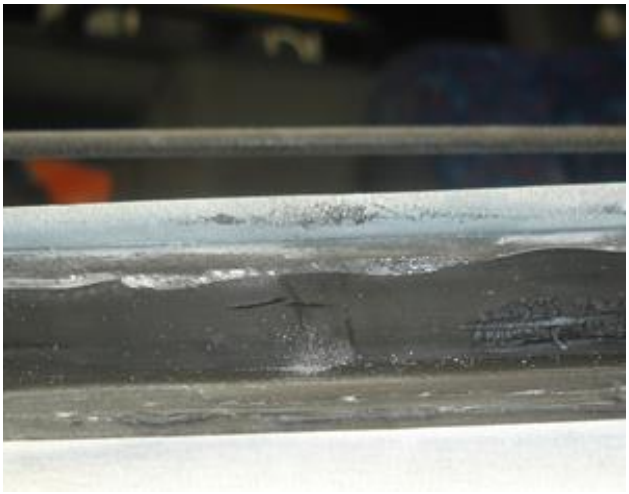
All adhesive residue must be removed with a pneumatic knife or similar tools, avoiding any tool contact with the structure, especially if the residue is glued to the structure.

It is necessary to remove the rubber excess, does not need to remove completely, just enough to let 1 to 2 mm so the adhesive has a better adherence.

Careful while removing adhesive, avoid getting too close to the anti-corrosion paint (green). In case of a scratch on the ink, paint the place with a anti-corrosion ink.

See below the image.



rests of adhesive

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4 Fixation of the central pillar

Will be necessary to measure the gap center to install the central pillar.

See how to proceed visualizing the image below.

Central support bar.

Make the superior gap measure and mark the center, then make the same for the bottom part and mark the center.

Sand down the inferior gap on the structure's base where the central pillar's support will be. It is important to clean the place where the central pillar will be, to increase the weld surface.

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On the superior gap, make a cut so the pillar can fit. Fix the central pillar to verify the measures.

Cut a 10 cm strip that bends as shown on the image, do not remove the strip because the weld is done from the inside of the central pillar. Welding inside the pillar avoid any damaged to the external finishing.

Base

Topo

See the weld on the base and on the top. Remember that the superior part was welded from inside de structure.

At end paint the central pillar with anti-corrosive paint, case the pillar is not painted yet.

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5 Local cleaning

5.1 STRUCTURE'S CLEANING

The structure must be cleaned with a air jet (oil's free), removing completely the glass dust generated during the process. Following, will be necessary to use a clean cloth with alcohol all over the area that had the adhesive removed, so all impurities are removed, like digitals, liquids, etc.

5.2 WINDSHIELD CLEANING

The new windshield to be installed must be cleaned on the edge using a flannel with alcohol (let evaporate for 5 minutes). Some products will be used to increase the glue adherence on the cleaned area.

Use for this job a plastic glove and a clean flannel with alcohol.

6 application

6.1 WINDSHIELD PROTECTION

The windshield protection must be made passing a masking tape, from the inside, over the window's edge leaving only a 2 cm area that will receive the primer.

On the window's front side, the tape must cover all the edge, providing a windshield's external protection.

See below how to proceed:

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Proteção com fita

6.2 BETAPRIME'S APPLICATION

Betaprime 5500

Check the image on the left, the distance to spread the Betaprime 5500.

otice that the Betaprime 5500 is spread all over the window's and the structure's edge to a better adhesive adherence.

Apply the layer over the surface in a uniform way avoiding overlap of layers, so it dries faster.

Remember that the layer of Betaprime must be spread over the window's edge and structure's edge. It is important to let it dry for 15 minutes, before applying the glue.

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6.3 WINDSHIELD SUPPORT

See the windshield's support images below. Follow the instructions aside to learn how to install them. Remember that the support cannot have bigger a hardness compared to the cured adhesive's material.

Fix the lateral support in the windscreen wiper's screw thread.

The central support must be fixed on the center, at the windshields's bottom, so the windshield can be supported.

6.4 APPLYING THE ADHESIVE

The 7210 BN Betamate serve as adhesive to glue the windshield to the structure.

Must be applied a equal amount over the structure's edge, where the windshield will fit.

The amount of adhesive must give the final finishing to the process. It is important to make sure that there is no empty gaps between the glue string and the finishing.

The minimum time to dry is of eight hours depending on the temperature and humidity conditions.

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7 Placing the windshield

7.1 PLACING THE WINDSHIELD

The windshield must be placed on the place where the old has been taken off.

It is importante to me sure that he new windshield is compatible with the structure, check the parts catalog.

The image shows the windshield already placed.

Guarantee the windshield's alignment.

At the end of the process, remove the adhesive's excess, give the final finishing making the surface smooth. Remove the tape before the cure time

Check the images on the left.

7.2 FINISHING

The finishing must be done moistening one of the hands with water and soap, spreading around the adhesive, letting the surface smoother.

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7.3 *ALIGNMENT*

To align the windshield, the cuppingglass tool is necessary. The alignment is important, because it prevents the wiper's vanes from wearing.

7.4 FINAL IMAGE

If the job done has followed the steps on this manual, the final result will be the same as the picture shows. remember that the adhesive needs some days to cure totally, during this period, drive carefully.

Check the image:

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